AMENDMENTS TO THE CLAIMS

Please amend the claims of the present application as set forth below.

1. (Previously presented) A rotating data storage disk system comprising:

a plurality of concentric tracks defined on a disk;

said disk including at least two data storage areas, wherein each area is sized to store a copy of a set of data and the data storage areas are substantially equidistantly spaced from each other and wherein all of the at least two data storage areas are located within plus or minus one track of the same track;

a drive mechanism coupled to the disk; and

a remote controller in communication with the drive mechanism for maintaining data coherency between the at least two data storage areas and keeping track of deferred writes to the at least two data storage areas of the disk.

2. (Original) The rotating data storage disk of claim 1 wherein the at least two data storage areas are located at radially opposed locations at a

substantially 180 degree angular offset with respect to a spin axis of the rotating data storage disk and mirrored across the spin axis.

3. (Canceled)

4. (Original) The rotating data storage disk of claim 1 wherein the disk further comprises at least two magnetic recording surfaces, wherein the data storage areas are formed in a single one of the at least two magnetic recording surfaces.

5. (Original) The rotating data storage disk of claim 1 wherein the disk further comprises at least two magnetic recording surfaces, wherein the data storage areas are formed in separate ones of the at least two magnetic recording surfaces.

6. (Original) The rotating data storage disk of claim 1 wherein the disk further comprises an optical recording surface.

7. (Original) The rotating data storage disk of claim 1 wherein the disk further comprises a magneto-optical recording surface.

8. (Canceled)

9. (Canceled)

10. (Previously Presented) The rotating data storage disk of claim 1 wherein the at least two data storage areas comprise "n" storage areas and the disk exhibits a characteristic virtual revolutions per minute (RPM) that is a multiple n of the actual spin speed of the rotating data storage disk.

11. (Previously presented) A disk drive system comprising:

one or more platters, each platter supporting at least one recording surface, wherein the platters are aligned about a common central axis;

a plurality of concentric tracks defined on the platter;

means for spinning the platters about the common central axis;

a recording head associated with each recording surface;

an actuator mechanism coupled to each recording head to move the recording head into proximity with selected portions of the recording surface in response to received commands; and

at least two replicates of data stored in at least two data storage areas such that any one of the at least two replicates can be accessed to service a data access request and all of the at least two data storage areas are located within plus or minus one track of the same track; and

a remote controller for maintaining data coherency between the at least two data storage areas and keeping track of deferred writes to the data storage areas.

12. (Previously Presented) The disk drive system of claim 11 wherein the data storage areas are located so as to be mirrored about a spin axis of the platters.

13. (Canceled)

14. (Original) The disk drive system of claim 11 wherein the data storage areas are formed in a single one of the one or more platters.

15. (Original) The disk drive system of claim 11 wherein the data storage areas are formed in separate platters of the one or more platters.

16. (Previously Presented) The disk drive system of claim 11 wherein each recording surface further comprises a plurality of concentric tracks defined on the recording surface and each track is substantially aligned with a corresponding track on an adjacent platter, wherein all of the at least two data storage areas are located on adjacent tracks.

17. (Canceled)

18. (Previously Presented) The disk drive system of claim 11 wherein the at least two data storage areas comprise "n" storage areas and the disk

exhibits a characteristic virtual revolutions per minute (RPM) that is a multiple n of the actual spin speed of the rotating data storage platter.

19. (Previously Presented) The disk drive system of claim 11 further comprising:

a command processor having an interface to receive external disk access requests and coupled to provide the disk access request to the actuator mechanism; and

memory coupled to the command processor and configured to store redundant write access request commands such that the at least two replicates can be stored asynchronously.

20 - 26. (Canceled)

27. (Previously presented) A disk controller in communication with a disk comprising:

a command port for receiving disk access commands;

a command processor for executing software processes;

a first process executing in the command processor for replicating a received write request, wherein the first process generates a replicated write request that refers to a disk track adjacent to a disk track referred to by the received write request;

a second process executing in the command processor for executing at least one of the received write request and replicated write request against a disk drive; and

means for maintaining data coherency between a first data storage area affected by a received write request and a second data storage area affected by a replicated write request.

28. (Original) The disk controller of claim 27 wherein the first process comprises processes configured to cause the command processor to determine radially opposed locations within the disk suitable for the disk access request.

29. (Original) The disk controller of claim 27 wherein the first process comprises processes configured to cause the command processor to determine locations on adjacent tracks within the disk suitable for the disk access request.

30. (Previously Presented) The disk controller of claim 28 wherein the second process receives the determined radially opposed locations and executes the at least one disk access request at the determined location.

31. (Original) The disk controller of claim 27 further comprising a redundant data table holding one or more pending write access requests and coupled to the second process such that the second process can execute the received disk access request and the replicated disk access request asynchronously.

32. (Previously presented) The disk drive system of claim 1, further comprising an integrated controller that manages data storage operations of the disk drive system.

33. (Previously presented) The disk drive system of claim 32, wherein:

the integrated controller maintains a first redundant data table in volatile memory, wherein the first redundant data table comprises information about one or more deferred write commands;

the remote controller maintains a second redundant data table in non-volatile memory, wherein the second redundant data table comprises information about one or more deferred write commands.

34. (Previously presented) The disk drive system of claim 33, wherein:

the integrated controller uses the information in the first redundant data table to perform a deferred write operation to one or more of the at least two data storage areas.

35. (Previously presented) The disk drive system of claim 34 wherein, upon completion of the deferred write operation, the integrated controller:

removes an entry corresponding to the deferred write operation from the first redundant data table; and

transmits a notification to the remote controller indicating completion of the deferred write operation.

36. (Previously presented) The disk drive system of claim 35 wherein, upon receipt of the notification, the remote controller removes an entry corresponding to the deferred write operation from the second redundant data table.

37. (Previously presented) The disk drive system of claim 33, wherein:

in response to a read request from a host computer, the remote controller uses the second redundant data table to determine whether the read request references data on the disk drive that is coherent.

38. (Previously presented) The disk drive system of claim 37 wherein the remote controller issues a SCSI read command if the read request references coherent data.

39. (Previously presented) The disk drive system of claim 37, wherein the remote controller issues a modified read command if the read request references data that is not coherent, wherein the modified read command specifies a location on the disk drive from which to read the referenced data.

40. (Previously presented) The disk drive system of claim 11, further comprising an integrated controller that manages data storage operations of the disk drive system.

41. (Previously presented) The disk drive system of claim 40, wherein:

the integrated controller maintains a first redundant data table in volatile memory, wherein the first redundant data table comprises information about one or more deferred write commands;

the remote controller maintains a second redundant data table in non-volatile memory, wherein the second redundant data table comprises information about one or more deferred write commands.

42. (Previously presented) The disk drive system of claim 41, wherein:

the integrated controller uses the information in the first redundant data table to perform a deferred write operation to one or more of the at least two data storage areas.

43. (Previously presented) The disk drive system of claim 42 wherein, upon completion of the deferred write operation, the integrated controller:

removes an entry corresponding to the deferred write operation from the first redundant data table; and

transmits a notification to the remote controller indicating completion of the deferred write operation.

44. (Previously presented) The disk drive system of claim 43 wherein, upon receipt of the notification, the remote controller removes an entry corresponding to the deferred write operation from the second redundant data table.

45. (Previously presented) The disk drive system of claim 41, wherein:

In response to a read request from a host computer, the remote controller uses the second redundant data table to determine whether the read request references data on the disk drive that is coherent.

46. (Previously presented) The disk drive system of claim 45 wherein the remote controller issues a SCSI read command if the read request references coherent data.

47. (Previously presented) The disk drive system of claim 45, wherein the remote controller issues a modified read command if the read request

references data that is not coherent, wherein the modified read command specifies a location on the disk drive from which to read the requested data.